

IN MEMORIUM

Patricia Mather (née Kott) (1925–2012)



Dr Patricia Mather at her desk in the old Queensland Museum in Fortitude Valley in February 1981.

Patricia Mather AO, PhD, DSc, DSc (hon. causa), FAI Biol, FMLS, passed away at the age of 86, on the evening of 4 January 2012 following a period of illness.

Charming, passionate, fierce, tenacious, obstinate, argumentative, persistent, productive, industrious, focussed, reliable, loyal, devoted (to a cause, and to her family), and a wonderful hostess — these are just some of the epithets that have been applied when mentioning the name 'Patricia Mather'.

Born in Perth, Western Australia, on 12 December 1925, Patricia was the eldest of four daughters to Max Kott, lawyer, and Lillian May, née Lucas. She attended St Hilda's Church of England Girl's School, Mosman, where her indomitable spirit led her to excel in all facets of school life — not only did she have a sharp intellect, but she was also a fine sportswoman. By all accounts, she had a very happy childhood, and despite living most of her life in Brisbane, Queensland, it was clear to



Patricia in the field in 1949, at the beginning of her career in marine biology (Courtesy of Patricia Mather).

those who knew her, that Perth always held a special place in her heart.

She entered the University of Western Australia in 1943, graduating with First Class Honours in 1948, for a thesis on the taxonomy of two families of Polychaeta (Nereidae and Eunicidae), which was the basis for her first scientific paper in 1951. As an undergraduate she undertook holiday jobs with her fellow student Ron Kenny, sorting plankton for Keith Sheard at the CSIR (later to become CSIRO) Fisheries Division labs. This background, along with the recommendation of her thesis examiner, the renowned Professor W. Dakin (of *Australian Seashores* fame), led her to be offered a research position as plankton officer in the Fisheries Division of CSIR in Cronulla, NSW. Thus, shortly after her 23rd birthday, on New Years Day, 1948, she arrived in eastern Australia to begin a professional career that would continue until her death, 64 years later.

Building on the earlier milestone works on plankton by Dakin & Colefax, and on pelagic tunicates by Harold Thompson, Patricia's major contribution from this time was the station lists that documented the New South Wales coastal zooplankton up to the mid 1950s. She also

developed a spinning device (still in use) to divide plankton-net catches into reliable subsamples. It was Harold Thompson, then chief of the Division, who suggested that she might like to begin taxonomic studies of the Ascidiacea 'in her spare time'. This would become her life's work.

At the end of 1949, Patricia won a CSIRO overseas studentship to spend a term at University College (London University) undertaking a course on experimental biology of invertebrates (with G.P. Wells), and several months studying the ascidian collections in what was then the British Museum (Natural History). This was followed by 20 months at the prestigious Laboratory of the Marine Biological Association of the United Kingdom at Plymouth, where she did pioneering work on spontaneous contractions of solitary ascidians, as well as taxonomic studies on English Channel ascidians. This was a very happy period for her, and she regaled many a social occasion throughout her life with stories of her escapades. Although returning to Australia in late 1951 to resume her position as plankton officer in Cronulla, she became increasingly consumed by her fascination with the Ascidiacea.

In 1955 she married Wharton B. Mather, a geneticist and lecturer in the Zoology Department of the University of Queensland, and this brought her CSIRO career to an end and heralded the move to Brisbane and a period dominated by family. During the next decade she alternated having children with periods of research on ascidians funded by small Science and Industry Endowment Fund grants (1955, 1957) and a Commonwealth Graduate Student Award (1961–62) that led to her PhD degree from the University of Queensland, but which terminated with the birth of her third son. By 1963, she had already established herself internationally as an authority on ascidians, and despite her still young family, Patricia returned to full time work, as a Research Fellow in the University of Queensland funded by Personal Service Contracts (1965–1968) from the United States National Museum of Natural History (Smithsonian Institution) to work on the American national collections. From this she was to produce an important monograph on Antarctic ascidians, a major work for which Patricia received a Doctorate of Science from the University of Western Australia (1970). With these contracts finished, in 1969 she obtained the first of many subsequent grants from the Australian Research Grants Committee. At this time, ‘soft money’ from research grants and consultancies was relatively uncommon, and such funding for so long (1963–1973) was a testament to Patricia’s research productivity. More importantly it made it possible to employ a loyal daily housekeeper who helped run the household, the children, and the two Labrador dogs.

However, in 1973, with her three children now schoolboys, Patricia started to look for more career stability, and where better for a taxonomist, than at the local Queensland Museum. The problem was that the only available vacancy was for a Curator of Mollusca. The Director of the time, the young palaeontologist, Alan Bartholomai, recalls

Patricia’s confident response to the news, ‘Molluscs? No problem, I can do molluscs’. Despite some understandable misgivings, the Museum didn’t want to lose someone of Patricia’s stature and experience, especially at a time when they were growing rapidly, and for the first time in their history establishing a stable of first-class taxonomists across a range of disciplines. Two years later the position of Curator of Higher Invertebrates was created especially for Patricia, and she was finally given *carte blanche* to pursue her full-time study of ascidians. She wasted no time in turning a modest holding of ascidians into the most significant collection of Australian and Indo-West Pacific species in the world. Under her stewardship the collection, grew to over 10,000 specimens encompassing more than 800 species, representing all the families and genera known from intertidal and shallow, sub-tidal habitats, including coral reefs (especially her beloved Heron Island!). Always a hard task-master, she was not easy to work for, and for many years there was to be a steady succession of technical assistants coming and going. One memorable story concerned a handsome, tall, young man, of whom Patricia seemed particularly pleased, except that he used to have frequent short periods of sick leave. One morning Pat stormed into work holding a shop-catalogue in which appeared numerous pictures of her moonlighting assistant as a male-model! Patricia loudly proclaimed, ‘that’s it, from now on I am only going to employ ugly technicians!’ Nevertheless she was genuinely fond of many of her assistants, and was to count some as long-time friends.

During her years at the Museum she worked hard and published prolifically. She continued to raise her international profile by working visits to leading museums and marine laboratories in Europe and the US, including spending several months over two successive years as a visiting research fellow in the University of the South Pacific. These were also the years of productive collaboration with Professor Cliff Hawkins of the University of

Queensland (who was investigating the inorganic chemistry of the Ascidiacea); and with botanists and cell biologists of Sydney University studying the newly discovered *Prochloron*/ascidian symbioses. Patricia discovered some 20 of these associations, as well as describing the means by which the *Prochloron* is passed on to subsequent generations. She always published her research under her maiden name, Patricia Kott, reserving 'Mather' for ancillary publishing activities. Overall she produced over 130 published works across the broad spectrum of her interests, however undoubtedly the work she was most proud of was her major monograph on the 'Australian Ascidiacea' (published in four parts between 1985 and 2001).

She also formed a deep love of museums, and threw herself into many of the diverse range of activities demanded of a curator. She was always a strong advocate of the role of museums in documenting and interpreting the natural world, and the need for proper funding of taxonomic research in Australia. In her latter years she continued to lobby governments to establish a 'National Institute of Taxonomy', which she believed was a vital step in reversing the ever worsening 'taxonomic impediment' in Australia. She often repeated the simple truth that 'taxonomy is the integrative basis of biology', and bemoaned the fact that many museums appear to be eschewing the support of taxonomic research, and changing their emphases from science to user-pays consultancies and popular entertainment.

Patricia was fiercely loyal to the Queensland Museum and everything it represented or aspired to become – even at times when she perceived it might be heading in a direction she did not support. It was not in her nature to hold back on her opinions, and while certain senior managers might have shown the scars of battle, few ever questioned her passion or commitment to the Museum. Her vision was for a respected and venerable institution, built on the authority that arises out of a strong record of evidence-based research on world class

collections – a vision that continues to drive us all. Pat was also passionate in her efforts to communicate knowledge from scientific research to influence politicians and decision-makers towards the protection of our natural resources. Indeed, during the 1970s, in her roles as Secretary and President of the Great Barrier Reef Committee, Pat played a significant part in the 'Save the Barrier Reef' conservation campaign that was to forever prevent oil drilling in Great Barrier Reef waters. She also played a vital role in drafting the initial Bill for an Act for the Great Barrier Reef that would eventually lead to the creation of the GBR Management Authority.

Required to officially retire in 1990 (ironically non-compulsory retirement was to be introduced into the Queensland Public Service only a short time later), she was immediately made an Honorary Research Associate and allowed to maintain her office. She continued to come to work as if nothing had happened for the next 21 years – it was often humourously remarked that she had a better record of attendance than most of the paid staff. Indeed Patricia lived for her work, first and foremost, and could not imagine a life without it. For much of this time she also continued to win grant money to keep a full time research assistant employed to assist her. Of the 396 species she described whilst at the Museum, 275 were described following her retirement! Also, rather typically, once she could no longer avoid it, she took the bull-by-the-horns and became proficient with basic personal computing and email. She had rebuked her younger colleagues vociferously for many years about always having their eyes glued to their monitors instead of their microscopes, but by then she was grateful for their ready help to get her out of trouble!

Some major accolades followed on closely after her retirement, including a Queensland Museum Medal (1991), the Australian Marine Science Association (AMSA) Jubilee Prize (1992), and an Officer in the Order of Australia (1992).

While Patricia enjoyed robust good health for most of her life, she had also been a heavy



A proud Dr Mather at the unveiling of 'Patricia Mather Place' at the new Queensland Biosciences Precinct at Boggo Road, Dutton Park in April 2011.

smoker. In her inimitable style, when she was in her early sixties she just simply stopped smoking. No fuss, just her iron will. Unfortunately, although it was some years later before it became evident, there had been significant damage to her lungs. As the years progressed she struggled more and more to breathe. In an attempt to keep her disease at bay, she actively took up walking all over the steep terrain of the suburb of Spring Hill where she lived, and would swim many lengths of her small pool, even on the coldest days in winter. Such was her nature. In late 2009 she succumbed to a very serious bout of double pneumonia, and hovered close to death for some weeks, however she had not finished her work at the Museum, and although it took many months, and she was no longer allowed to drive, eventually she was back in her beloved office. As a small concession to what she had gone through, she now only came four days a week, and a little later in the morning than she used to!

Always a great admirer of Charles Darwin, she once said that her view of biology was best summed up in Darwin's words from the last paragraph of the *Origin of Species* — 'there is grandeur in this view of life ... that from so simple a beginning endless forms most beautiful and most wonderful have been, and are being evolved'.

Qualifications and awards

- Officer of the Order of Australia (1992)
- Bachelor of Science with first class honours (UWA, 1948)
- Doctor of Philosophy (UQld, 1962)
- Doctor of Science (UWA, 1970)
- Doctor of Science honoris causa (UQld, 1990)
- Elected Fellow of the Australian Institute of Biology (1989)
- Foreign Member of the Linnean Society London (2001)

- Elected Life Member of the Australian Coral Reef Society (1985)
- Winner of the Australian Marine Science Association Jubilee Prize (1992)
- Winner of the Queensland Museum Medal (1991)
- Winner of two Whitley Awards for the best book on science history ('Time for a Museum'. The History of the Queensland Museum, 1986), and as co-editor with the late Isobel Bennett, for the best natural history book ('The Coral Reef Handbook', 1993).

Contributions to science policy, infrastructure for research funding, and conservation biology

- Marine Research Allocations Advisory Committee (MST 1986–1987)
- Australian Research Council's Biological Panel (1988–1992)
- Australian Biological Resources Study Advisory Committee (1989–1994)
- Hon. Secretary (1966–74), and subsequently President, of the Great Barrier Reef Committee (1976–1977)
- Foundation member of the Great Barrier Reef Marine Park Authority Consultative Committee (1976–85)
- Organising committee and co-convenor of the Second International Coral Reef Symposium (1973)
- Councillor and a member of the Executive Committee Australian Conservation Foundation (1972–1973)
- Member of the Australian Academy of Science, Fauna Standing Committee (1973–1980), and its successor, the Australian Academy National Committee for Animal and Veterinary Science – Fauna Subcommittee (1981–1996), participating in the successful establishment of the Australian Biological Resources Study
- Member of the Board and Executive of the University of Queensland and Great Barrier

Reef Committee Heron Island Research Station Board (1970–1980)

- Member of the Lizard Island Research Station Board of Consultants (1976–1979)
- A number of editorial roles such as the University of Queensland Research Committee's 'Research' (1969, 1971), the Queensland Museum 'National Estate in the Moreton-Wide-Bay Burnett' (1975, 1976), the Queensland Museum's 'The Small Museum' (1979, 1984), and more recently, the subject editor for Ascidiacea at the online taxonomic journal *Zootaxa* (2001–2010).

Taxonomic milestones

- 98 papers on taxonomy, biogeography, or ecology of marine invertebrate, mostly ascidians, and especially the 1,424 pages of the Australian Ascidiacea (Parts 1–4), published in the *Memoirs of the Queensland Museum*.
- Discovered more than three-quarters (585) of the 726 species of ascidians now known from Australia (about 25% of the estimated world diversity), with 462 species being newly described by her.
- Described 15 new genera and 5 new families.
- Developed a collection of specimens of ascidians from almost nothing, when she started, to more than ten thousand specimens and over 800 species – without doubt one of the most comprehensive and best curated ascidian collections in the world.

Her self-confessed most significant achievements

- The Great Barrier Reef Committee's significant contribution to the proceedings of the Royal Commissions on Oil Drilling in the Great Barrier Reef, ensuring that objective evidence on the Reef's structure and biology was put before the Commissions
- Drafting the initial Bill for an Act for the Great Barrier Reef, which subsequently formed the basis for legislation leading to the existence of the Great Barrier Reef Marine Park Authority.

- Serving on the Ministerial Biodiversity Advisory Committee to the Federal Minister of the Environment on science policy in Australia.
- Having a street named 'Patricia Mather Place', in the Biosciences Precinct at Dutton Park, alongside two other Queensland science luminaries, Dr Joe Baker and Dr Peter Doherty.

'What am I most proud of? I have described 500 of the 700 species of ascidians now known from Australia — I suppose I'm quite proud of that. And I'm really proud of my three sons.'

NAMES CREATED TO HONOUR PATRICIA MATHER (NEE KOTT)

Tunicata

- Pycnoclavella kottae* (Millar, 1960)
Phallusia kottae (Monniot & Monniot, 1996)
Styela kottae Monniot & Monniot, 1991
Octacnemus kottae Sanamyan & Sanamyan, 2002
Aplidium kottae Brunetti, 2007

Crustacea

- Periclimenaeus kottae* Bruce, 2005
Periclimenaeus matherae Bruce, 2005

Arachnida

- Encyocrypta kottae* Raven & Churchill, 1991
Eupograptus kottae Raven, 2009

Chemical

- Kottamide E, a novel alkaloid isolated from *Pycnoclavella kottae*.

Author Citations for Honorifics

- Millar, R.H. 1960. Ascidacea. *Discovery Report*, 30: 159. Cambridge.
- Monniot, C & Monniot, F. 1991. Tunicata: peuplements d'ascidies profondes en Nouvelle-Calédonie. Diversité des stratégies adaptatives. *Mémoires du Muséum National d'Histoire Naturelle Série A Zoologie* 151: 357-448.
- Monniot, C & Monniot, F. 1996. New collections of ascidians from the western Pacific and south-eastern Asia. *Micronesica* 29(2): 133-279.
- Sanamyan, K.E. & Sanamyan, N.P. 2002. Deep-water ascidians from the south-western Atlantic (RV Dmitry Mendeleev, cruise 43 and Academic

Kurchatov, cruise 11). *Journal of Natural History* 36(3): 305-359.

- Appleton, D.R. & Copp, B.R. 2003. Kottamide E, the first example of a natural product bearing the amino acid 4-amino-1, 2-dithiolane-4-carboxylic acid (Adt). *Tetrahedron Letters* 44(50): 8963-8965.
- Bruce, A.J. 2005. New species of *Periclimenaeus* Borradaile (Crustacea: Decapoda: Pontoninae) from Ashmore Reef, north Western Australia, with remarks on *P. pachydentatus* Bruce, 1969. *Records of the Western Australian Museum* 22(4): 325-342.
- Brunetti, R. 2007. Nomenclatural Acts: homonymy in the Ascidacea (Tunicata) and proposed nomina nova. *Zootaxa* 1613: 67-68.
- Raven, R.J. 2009. Revisions of Australian ground-hunting spiders: IV. The spider subfamily Diaprogaptinae subfam. nov. (Araneomorphae: Miturgidae). *Zootaxa* 2035: 1-40.
- Raven, R.J. & Churchill, T.B. 1991. A revision of the mygalomorph spider genus *Encyocrypta* Simon in New Caledonia (Araneae Barychelidae). *Mémoires du Muséum National d'Histoire Naturelle Série A Zoologie* 149: 31-86.

LIST OF ASCIDIAN TAXA (TUNICATA) DESCRIBED BY PATRICIA KOTT

Families (6)

- Stomozoidae Kott, 1957
 Plurellidae Kott, 1973
 Pycnoclavellidae Kott, 1990
 Protopolyclinidae Kott, 1992
 Ritterellidae Kott, 1992
 Vitrumidae Kott, 2009

Genera (16)

- Stomozoa* Kott, 1957
Adagnesia Kott, 1963
Minostyela Kott, 1969
Protoholozoa Kott, 1969
Monoandrocampa Kott, 1972
Plurella Kott, 1973
Atriolum Kott, 1983
Microgastra Kott, 1985
Asajirus Kott, 1989
Brevicollus Kott, 1990

Euclavella Kott, 1990
Neodistoma Kott, 1990
Polydistoma Kott, 1990
Anadistoma Kott, 1992
Coudominium Kott, 1992
Claudenus Kott, 1998
Clitella Kott, 2001
Salix Kott, 2005
Vitrum Kott, 2009

Species (504)

Ascidia prolata Kott, 1985
Corella halli Kott, 1951
Ascidia thompsoni Kott, 1952
Cnemidocarpa longata (Kott, 1952)
Ecteinascidia flora Kott, 1952
Lissoclinum cupuliferum Kott, 1952
Microcosmus stoloniferus Kott, 1952
Molgula batemani Kott, 1952
Perophora multistigmata Kott, 1952
Polyandrocarpa australiensis Kott, 1952
Polyandrocarpa triggsiensis Kott, 1952
Polycarpa capricornia Kott, 1952
Polycitor searli Kott, 1952
Pyura leenwinia Kott, 1952
Pyura parvispinatus Kott, 1952
Pyura plicata Kott, 1952
Agnezia complicata Kott, 1954
Aplidium antarcticum Kott, 1954
Aplidium punctans (Kott, 1954)
Ascidia plicata Kott, 1954
Cnemidocarpa lobata (Kott, 1954)
Cystodytes tasmanensis Kott, 1954
Leptoclinides kerguelensis Kott, 1954
Leptoclinides multilobatus Kott, 1954
Molgula kerguelensis Kott, 1954
Molgula macquariensis Kott, 1954
Molgula spiralis Kott, 1954
Molguloides tenuis Kott, 1954
Parengyrioides macquariensis Kott, 1954
Polycitor columna Kott, 1954

Sycozoa tasmanoides Kott, 1954
Synoicum circumvolutum Kott, 1954
Pyura littoralis (Kott, 1956)
Clavelina baudinensis Kott, 1957
Clavelina dagysa Kott, 1957
Distaplia viridis Kott, 1957
Eudistoma arenosum Kott, 1957
Eudistoma globosum Kott, 1957
Eudistoma murrayi (Kott, 1957)
Euherdmania australis Kott, 1957
Mouniotus australis (Kott, 1957)
Polycitor longitube Kott, 1957
Polycitor subaraborensis Kott, 1957
Polycitor translucida Kott, 1957
Polycitor translucidus Kott, 1957
Pseudodistoma australe Kott, 1957
Pycnoclavella diminuta (Kott, 1957)
Ritterella dispar Kott, 1957
Sigillina fantasiana (Kott, 1957)
Stomozoa murrayi Kott, 1957
Trididemnum aspiculatum Kott, 1957
Didemnum rotnesti Kott, 1962
Leptoclinides coeleuteratus (Kott, 1962)
Leptoclinides imperfectus (Kott, 1962)
Polysyncrator circulum Kott, 1962
Polysyncrator discoides Kott, 1962
Polysyncrator orbiculum Kott, 1962
Trididemnum pseudodiplosoma (Kott, 1962)
Trididemnum spiculatum Kott, 1962
Adagnesia opaca Kott, 1963
Aplidium amorphatum Kott, 1963
Aplidium australiense Kott, 1963
Aplidium brevilarvaceum Kott, 1963
Aplidium coniferum Kott, 1963
Aplidium jacksoni Kott, 1963
Aplidium opacum Kott, 1963
Aplidium parvum Kott, 1963
Aplidium rubricollum Kott, 1963
Aplidium triggsense Kott, 1963
Placentela areolata Kott, 1963
Polyclinum marsupiale Kott, 1963

- Pseudodiazona claviformis* (Kott, 1963)
Synoicum atopogaster Kott, 1963
Adagnesia antarctica Kott, 1969
Aplidium abyssum Kott, 1969
Caenagnesia schmitti Kott, 1969
Diplosoma antarcticum Kott, 1969
Hypsistozoa obscura Kott, 1969
Minostyela clavata Kott, 1969
Placentela translucida Kott, 1969
Protoholozoa pedunculata Kott, 1969
Pyura tunica Kott, 1969
Synoicum ramulosum Kott, 1969
Synoicum tentaculatum Kott, 1969
Molgula millari Kott, 1971
Aplidium elatum Kott, 1972
Claudenus antipodis (Kott, 1972)
Clavelina mirabilis Kott, 1972
Eugyra moretonensis Kott, 1972
Hypodistoma mirabile (Kott, 1972)
Leptoclinides fungiformis Kott, 1972
Metandrocarpa indica Kott, 1972
Molgula diversa Kott, 1972
Molgula ellistoni Kott, 1972
Molgula rima Kott, 1972
Molgula sphaera Kott, 1972
Pareugyrioides exigua (Kott, 1972)
Placentela ellistoni Kott, 1972
Polyandrocarpa simulans Kott, 1972
Polycitor obeliscus Kott, 1972
Pycnoclavella arenosa Kott, 1972
Pyura scoresbiensis Kott, 1972
Pyura tendata Kott, 1972
Stolonica truncata Kott, 1972
Symplegma arenosa Kott, 1972
Aplidium directum Kott, 1973
Monoandrocarpa plana Kott, 1973
Plurella elongata Kott, 1973
Aplidium promum Kott, 1975
Leptoclinides volvus Kott, 1975
Microcosmus plauus Kott, 1975
Clavelina pseudobaudinensis (Kott, 1976)
Lissoclinum punctatum Kott, 1977
Trididemnum clinides Kott, 1977
Trididemnum uniatum Kott, 1977
Diplosoma multipapillata Kott, 1980
Trididemnum unibilum Kott, 1980
Trididemnum paracyclops Kott, 1980
Trididemnum strigosum Kott, 1980
Eudistoma discederata Kott, 1981
Eudistoma vitata Kott, 1981
Lissoclinum pacificense (Kott, 1981)
Dideumum etiolum Kott, 1982
Trididemnum paraclinides Kott, 1982
Atriolum robustum Kott, 1983
Trididemnum tegulum Kott, 1984
Adagnesia venusta Kott, 1985
Amphicarpa meridiana Kott, 1985
Amphicarpa nodula Kott, 1985
Ascidia decepta Kott, 1985
Ascidia nerea Kott, 1985
Ascidia occidentalis Kott, 1985
Ascidia parasamea Kott, 1985
Cnemidocarpa aculeata Kott, 1985
Cnemidocarpa completa Kott, 1985
Cnemidocarpa fissa Kott, 1985
Cnemidocarpa intestinata Kott, 1985
Cnemidocarpa tripartita Kott, 1985
Ctenyura tetraplexa Kott, 1985
Ctenyura tortuosa Kott, 1985
Ecteinascidia maxima Kott, 1985
Eugyra mamillata Kott, 1985
Eugyra millimetra Kott, 1985
Metandrocarpa agitata Kott, 1985
Metandrocarpa miniscula Kott, 1985
Microcosmus tuberculatus Kott, 1985
Molgula incidata Kott, 1985
Perophora clavata Kott, 1985
Perophora modificata Kott, 1985
Phallusia barbarica Kott, 1985
Phallusia millari Kott, 1985
Polyandrocarpa sparsa Kott, 1985
Polyandrocarpa wastonia Kott, 1985

- Polyandrocarpa watsonia* Kott, 1985
Polycarpa flava Kott, 1985
Polycarpa intonata Kott, 1985
Polycarpa nota Kott, 1985
Polycarpa papyra Kott, 1985
Polycarpa plenovata Kott, 1985
Polycarpa stirpes Kott, 1985
Polycarpa tinctoria Kott, 1985
Pyura abradata Kott, 1985
Pyura coufragosa Kott, 1985
Pyura crassacapitata Kott, 1985
Pyura isobella Kott, 1985
Pyura navicula Kott, 1985
Pyura scortea Kott, 1985
Pyura tasmanensis Kott, 1985
Pyura viarecta Kott, 1985
Stolonica aluta Kott, 1985
Botryllocarpa elongata Kott, 1990
Brevicollis tuberosus Kott, 1990
Clavelina nigra Kott, 1990
Clavelina oliva Kott, 1990
Clavelina robusta Kott, 1990
Distaplia cuscina Kott, 1990
Distaplia florida Kott, 1990
Distaplia muriella Kott, 1990
Distaplia pallida Kott, 1990
Distaplia prolifera Kott, 1990
Distaplia raceuosa Kott, 1990
Distaplia regina Kott, 1990
Distaplia retinaculata Kott, 1990
Distaplia tokiokai Kott, 1990
Distaplia violetta Kott, 1990
Eucoelium orientalis (Kott, 1990)
Eudistoma anaematum Kott, 1990
Eudistoma aureum Kott, 1990
Eudistoma bulbatum Kott, 1990
Eudistoma carnosum Kott, 1990
Eudistoma constrictum Kott, 1990
Eudistoma eboreum Kott, 1990
Eudistoma gracilum Kott, 1990
Eudistoma incubitum Kott, 1990
Eudistoma maculosum Kott, 1990
Eudistoma nulum Kott, 1990
Eudistoma microlarvum Kott, 1990
Eudistoma pratulum Kott, 1990
Eudistoma purpureum Kott, 1990
Eudistoma reginum Kott, 1990
Eudistoma sabulosum Kott, 1990
Eudistoma superlatum Kott, 1990
Eudistoma tigrum Kott, 1990
Eudistoma tumidum Kott, 1990
Eusynstyela grandis Kott, 1990
Neodistoma nammillatum Kott, 1990
Perophora sabulosa Kott, 1990
Polycarpa directa Kott, 1990
Polycarpa kapala Kott, 1990
Polycitor annulus Kott, 1990
Polycitor calanais Kott, 1990
Polycitor cerasus Kott, 1990
Polycitor emergens Kott, 1990
Polycitor uubilis Kott, 1990
Polydistoma fungiforme Kott, 1990
Polyzoa exigua Kott, 1990
Polyzoa nodosa Kott, 1990
Pycnoclavella aurantia Kott, 1990
Pycnoclavella elongata Kott, 1990
Pycnoclavella tabella Kott, 1990
Pyura rapaformis Kott, 1990
Sigillium grandissima Kott, 1990
Stomozoa australiensis Kott, 1990
Stomozoa bellissima Kott, 1990
Sycozoa brevicauda Kott, 1990
Sycozoa cavernosa Kott, 1990
Auadistoma attenuatum Kott, 1992
Aplidiopsis confluata Kott, 1992
Aplidiopsis mammillata Kott, 1992
Aplidiopsis sabulosa Kott, 1992
Aplidium acroporum Kott, 1992
Aplidium baculum Kott, 1992
Aplidium clivosum Kott, 1992
Aplidium congregatum Kott, 1992
Aplidium distaplium Kott, 1992

- Aplidium filiforme* Kott, 1992
Aplidium fluorescens Kott, 1992
Aplidium gastrolineatum Kott, 1992
Aplidium gelasinum Kott, 1992
Aplidium geminatum Kott, 1992
Aplidium incubatum Kott, 1992
Aplidium inflorescens Kott, 1992
Aplidium lenticulum Kott, 1992
Aplidium lodix Kott, 1992
Aplidium lunacratum Kott, 1992
Aplidium macrolobatum Kott, 1992
Aplidium magnilarvum Kott, 1992
Aplidium minisculum Kott, 1992
Aplidium multilineatum Kott, 1992
Aplidium ornatum Kott, 1992
Aplidium paralineatum Kott, 1992
Aplidium parastigmaticum Kott, 1992
Aplidium petrosum Kott, 1992
Aplidium robustum Kott, 1992
Aplidium rosarium Kott, 1992
Aplidium tabascum Kott, 1992
Cnemidocarpa amphora Kott, 1992
Cnemidocarpa tribranchiata Kott, 1992
Cystodytes ramosus Kott, 1992
Eulherdmania translucida Kott, 1992
Monniotus radiatus Kott, 1992
Morchellium albidum Kott, 1992
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